

42320

S/190/62/004/011/008/014  
B106/B101

11.2314

AUTHORS: Zhurkov, S. N., Abasov, S. A.

TITLE: Interrelation between mechanical strength and thermal destruction of polymers. III.

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 11, 1962,  
1703 - 1708TEXT: The object was to ascertain the value of  $u_0$  in the empirical equation  $\tau = \tau_0 \exp[(u_0 - \gamma\sigma)/kT]$  for certain polymers, and to compare this value with the activation energy of the thermal destruction.  $\tau$  is the durability of the polymer loaded with the tensile stress  $\sigma$ ;  $u_0$  is defined as the activation energy of mechanical destruction. The  $\log \tau$  versus  $\sigma$  and the  $\log \tau$  versus  $1/T$  diagrams were plotted for polyvinyl chloride, polymethyl methacrylate, polystyrene, isotactic polypropylene, and teflon.  $u_0$  was found from the relation  $u = u_0 - \gamma\sigma$  extrapolating the linear function  $u$  versus  $\sigma$  to  $\sigma = 0$ . Extrapolation of the linear function

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S/190/62/004/011/008/014

Interrelation between mechanical strength.. B106/B101

$\tau$  versus  $1/T$  to  $\sigma = 0$  yielded the same values of  $u_0$ . It was found that the  $u_0$  values, in kcal/mole, for the polymers investigated were compatible with the well known activation energies of the thermal destruction of these polymers. It was concluded that the breaking of the polymers is not a purely mechanical process, but consequent upon thermal decomposition of chemical bonds, activated by mechanical stress. There are 6 figures and 1 table.

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe AN SSSR  
(Physicotechnical Institute imeni A. F. Ioffe AS USSR)

SUBMITTED: July 6, 1961

X

Card 2/2

ZHURKOV, S.M.

Note on I.E. Kurov and V.A. Stepanov's article. Fiz. tver. tela 4 no.11:3352-3354 N '62. (MIRA 15:12)

1. Fiziko-tehnicheskiy institut imeni A.F. Ioffe AN SSSR, Leningrad.

(Strength of materials)  
(Kurov, I.E.) (Stepanov, V.A.)

S/126/62/013/005/011/031  
E091/E435

AUTHORS: Zhurkov, S.N., Betekhtin, V.I., Slutsker, A.I.  
TITLE: Block disorientation and strength of aluminium  
PERIODICAL: Fizika metallov i metallovedeniye, v.13, no.5, 1962,  
718-823

TEXT: The relationship between the degree of block disorientation and strength to rupture of aluminium was investigated. The choice of a strength parameter was governed by the authors' desire to provide a criterion which, like the U.T.S., had a conventional value. It would then depend on the time during which a body was in the stressed state. This time  $\tau$  is associated with the stress to rupture  $\sigma$  and the temperature  $T$  by the exponential relationship

$$\tau = \tau_0 \exp \left[ \frac{u_0 - \gamma_0}{RT} \right] \quad (1)$$

where  $R$  is the gas constant and  $u_0$ ,  $\tau_0$  and  $\gamma$  are constants determining the strength properties. Heat treatment, cold

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S/126/62/013/005/011/031  
E091/E435

Block disorientation ...

working and alloying do not affect the values of  $u_0$  and  $t_0$ , and all changes in strength of the metal are determined by the coefficient  $\gamma$ , which is thus a well-defined measure of change in the mechanical properties. For this reason the authors used  $\gamma$  as the strength parameter and studied its relationship with the degree of block disorientation, which was determined by X-ray diffraction under small angles. For the investigation, aluminium foil was used, from which flat specimens in the form of a double blade were prepared. The specimens were annealed prior to testing. The tests to rupture were carried out under conditions of uniaxial tension under constant stress and temperature. The dependence of durability on stress and temperature was determined and from the results obtained the value of  $\gamma$  was calculated. It was found that there is a well-defined relationship between  $\gamma$  and the degree of block disorientation: the lower the value of  $\gamma$  the greater the degree of block disorientation. The quantitative relationship between  $\gamma$  and  $\epsilon_{av}$  can be expressed by

$$\gamma = \frac{B}{\epsilon_{av}}$$

Card 2/3

Block disorientation ...

S/126/62/013/005/011/031  
E091/E435

where the coefficient B is independent of the annealing temperature, work-hardening and purity of the aluminium.  
There are 4 figures;

ASSOCIATION: Fiziko-tehnicheskiy institut AN SSSR im. A.F.Ioffe  
(Physicotechnical Institute AS USSR imeni A.F.Ioffe)

SUBMITTED: August 21, 1961

Card 3/3

ZHURKOV, S.N.; YEGOROV, Ye.A.

Identification of - and - forms of polypeptides by the method  
of nuclear magnetic resonance. Vysokom.sosed. 5 no.5:772-773 My  
'63. (MIRA 17:3)

1. Fiziko-tehnicheskiy institut imeni A.F.Ioffe AN SSSR.

L 11197-63

EWP(q)/EWT(m)/BDS-AFFTC/ASD-JD

8/0181/63/019/005/1326/1334

ACCESSION NR: AF3000609

AUTHOR: Zhurkov, S. N.; Batalitin, V. I.; Slutsker, A. I.

TITLE: Disorientation of unit structures and the strength of metals

SOURCE: Fizika tverdogo tela, v. 5, no. 5, 1963, 1326-1334

TOPIC TAGS: tensile strength, disorientation, Ag, Ni, Al, Cu, Zn, low-angle scattering, x-ray scattering, dislocations

ABSTRACT: The authors studied the relationship between tensile strength and degree of disorientation in certain metals: Ag, Ni, Al, Cu and Zn. The degree of disorientation was determined by low-angle scattering of x-rays. All the investigated metals exhibit a linear relationship between strength and disorientation in the structure. The role of dislocations is not altogether clear, but it would appear to reduce to a preparation of conditions for disruption to occur. Local restressing is produced, and there occur a consequent lowering of the value of the activation barrier and an acceleration of fluctuating rupture of bonds in the metal. Orig. art. has: 7 figures, 2 tables, and 8 formulas.

Card 1/2

ZHURKOV, S.N.; YEGOROV, Ye.A.

Effect of tensile stress on molecular mobility in oriented polymers.  
Dokl. AN SSSR 152 no.5:1155-1158 O '63. (MIRA 16:12)

1. Fiziko-tehnicheskiy institut im. A.F.Ioffe AN SSSR.
2. Chlen-korrespondent AN SSSR (for Zhurkov).

ZHURKOV, S.N.; SLUTSKER, A.I.; YASTREBINSKIY, A.A.

Effect of loading on the supermolecular structure of oriented polymers. Dokl. AN SSSR 153 no.2:303-305 N '63. (MIRA 16:12)

1. Fiziko-tehnicheskiy institut im. A.F.Ioffe AN SSSR.
2. Chlen-korrespondent AN SSSR (for Zhurkov).

ACCESSION NR: AP4039695

S/0181/64/006/006/1912/1914

AUTHORS: Zhurkov, S. N.; Zakrevskiy, V. A.; Tomashevskiy, E. Ye.

TITLE: The formation of free radicals during rupture and deformation of polymers containing sulfide bonds

SOURCE: Fizika tverdogo tela, v. 6, no. 6, 1964, 1912-1914

TOPIC TAGS: free radical, polymer, electron paramagnetic resonance, cross link, PE 1301 radiospectrometer, rubber, albumin, Thickol

ABSTRACT: The authors present data on a number of synthetic and natural polymers with sulfur cross links: vulcanized rubber (ebonite and cured rubber from natural rubber), Thickol, and cystine-bearing albumin (horn and hair). The EPR spectra of all samples were recorded on a standard PE-1301 radiospectrometer with 3-cm range. During mechanical rupture all the indicated polymers exhibited a characteristic aysymmetrical EPR spectrum, as shown in Fig. 1 on the Enclosure. The authors believe that this EPR spectrum must be due to radicals of the type R--S, formed by rupture of relatively weak C--S and S--S bonds. In Thickol the observed EPR signal may be caused either by rupture of the cross link or by rupture of the sulfide bonds in

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ACCESSION NR: AP4039695

the macromolecules (probably by both). Heating of a compressed sample of ebonite to room temperature (from the temperature of liquid nitrogen) led to a noticeable relaxation of deformation and to a decrease in the number of detected radicals. The number of free radicals may change either as a consequence of restoration of ruptured chemical bonds or through a change in conditions of stability of the free radicals in the polymer, causing a relaxation in the size of the sample. Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad  
(Physicotechnical Institute AN SSSR)

SUBMITTED: 11Feb64

NO REF Sov: 004

SUB CODE: MT

ENCL: 01

OTHER: 003

Card 2/3

ACCESSION NR: AP4039695

ENCLOSURE: 01

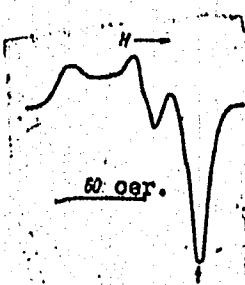


Fig. 1. EPR spectrum of mechanically ruptured polymers with sulfide bonds.

Card: 3/3

ZHURKOV, S.N.; RIGEL', V.R.; SANFIROVA, T.P.

Relation between the time-temperature dependence of the strength  
of polymers and the nature of their thermal degradation. Vysokom.  
spod. 6 no. 6:1092-1097 Je '64. (MIRA 13:2)

1. Fiziko-tehnicheskiy institut imeni Ioffe AN SSSR.

"APPROVED FOR RELEASE: 07/16/2001

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Card 1/2

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R002065030009-6"

ACCESSION NR: AP4034054

8/0126/64/017/004/0564/0571

AUTHORS: Zhurkov, S. N.; Betekhtin, V. I.; Slutsker, A. I.

TITLE: Time dependence of resistance of two-phase alloys on aluminum base

SOURCE: Fizika metallov i metallovedeniye, v. 17, no. 4, 1964, 564-571

TOPIC TAGS: aluminum alloy, duraluminum, copper, magnesium, binding energy, crystal lattice

ABSTRACT: The authors studied the time dependence of the resistance of two-phase alloys of Al with Cu (4, 0.6, and 2.7%) and Al with Mg (2%) in stable and unstable states. For these experiments, the alloys were prepared using a flux of 50% NaCl + 50% KCl. All the alloys were forged hot and were subjected to a homogenizing process of annealing. After annealing, the specimens were formed to double blades 0.1 mm thick, with the length of the homogeneous deformation part of 22 mm and a width of 3 mm. The experiments were performed under conditions of uniaxial tension at constant stress and constant temperature, following the procedure of S. N. Zhurkov and T. P. Sanfirrova (DAN, SSSR, 1955, 101, 237). The results showed the time dependence of the resistance of a two-phase alloy in the stable state (after high-temperature annealing) generally followed the relation  $t = t_0 \exp\left(\frac{U_0 - 1}{RT}\right)$ .

Card 1/2

ACCESSION NR: AP4034054

where  $U_0$ ,  $T_0$ ,  $\gamma$  are constants depending on the resistance properties of the alloy,  $T$  - durability,  $R$  - gas constant,  $\sigma$  - applied stress, and  $T$  - temperature. Separation of the second phase did not seem to affect the two parameters  $U_0$  and  $T_0$ , corresponding to the binding energy of the atoms of pure Al and the frequency of vibration of the atoms in the crystal lattice. The phenomenon of hardening was observed from the experimental data at phase separation. This is probably not due to change in the binding energy of the atoms but to a change in the third parameter  $\gamma$ . The time dependence of resistance in the metastable state did not follow the above law. The departure from this law corresponds to the instability of the alloy state. The authors thank L. I. Vasil'yev for discussion of the results. Orig. art. has: 1 formula, 6 figures, and 1 table.

ASSOCIATION: Fiziko-tehnicheskiy institut im A. F. Ioffe AN SSSR (Physico-technical Institute, AN SSSR)

SUBMITTED: 20 May 63

ENCL: 00

SUB CODE: MM

NO REF Sov: 026

OTHER: 008

Card 2/2

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R002065030009-6

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R002065030009-6"

L 16440-65  
ACCESSION NR: AP4044886

3

possible mechanical changes observed in the cell wall of the different species.

ASSOCIATION FOR WORKERS IN SCIENCE AND TECHNOLOGY A. F. Ioffe Academy of Sciences SSSR  
ПОДРАЗДІЛЕННЯ ВІДДІЛУ ВІДНОСІЙ СПІВРАБОТНИКІВ АКАДЕМІЇ НАУК СРСР

SUBMITTED: 27Apr64 ENCL: 00

116 D. S. H. GOMBERG 2004 JOURNAL OF POLYMER SCIENCE: PART A: POLYMERS

Card 2 / 2

polymerization, etc., and to determine

ABSTRACT: The purpose of the investigation was to trace the origin

of the material and to determine

Card 1/3

I 17690-65

ACCESSION NR: AP4049481

7

... and to compare the iron samples with

pressed the doublet of the triplet of the methyl group in the methylized fibers leaving only the singlet due to the triplet of the methyl group. A similar result naturally was observed under

the load, whilst it is not with the load. The results indicate that the use of the epf depends on the mechanism of destruction and the type of material used as a carrier, e.g. glass, ceramic, metal, etc.

C-7-4 2/2

1760045  
ACCESSION NR: AP4049481

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Card 3/3

ZHURKOV, S.N.; BETEKHTIN, V.I.; PETROV, A.I.; SLUTSKER, A.I.

Changes in the disorientation of blocks in metals during creep.

Fiz. met. i metalloved. 18 no.2:270-276 Ag '64.

(MIRA 18:8)

1. Fiziko-tehnicheskiy institut imeni A.F.Ioffe AN SSSR.

ZHURKOV, S.N.; NOVAK, I.I.; LEVIN, B.Ya.; SAVITSKII, A.V.; VETTEGREN', V.I.

Relation between the strength of a polymer and its molecular orientation. Vysokom.soced. 7 no.7:1203-1207 J1 '65.

(MIRA 18:8)

1. Fiziko-tehnicheskiy institut imeni Ioffe AN SSSR.

L 00749-66 EWT(m)/EPF(c)/EWP(j)/T/ETC(m) WW/RM

ACCESSION NR. AP5020968

UR/0190/05/007/003/1339/1343

AUTHOR: Zhurkov, S. N.; Regel', V. R.; Sansirova, T. P.

TITLE: Effect of active additives on the time-temperature dependence of polymer strength

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 3, 1965, 1339-1343

TOPIC TAGS: polymer, depolymerization, pole shift, thermal decomposition, radical reaction, stabilizer additive

ABSTRACT: The authors previously proposed that the pole shift effect in polymers is caused by secondary radical reactions which affect the degradation process rate. The effect of the addition of active additives to polymethylmethacrylate on the pole shift in  $\lg T - 1/T$  coordinates was studied. Radical reaction initiators (benzoyl peroxide) increased the pole shift, that is, shifted the pole to the right away from the ordinate axis. Radical reaction inhibitors (hydroquinone, diphenylmethacrylamide, 2, 2'-methylene-bis-4-methyl-6-tert-butylphenol, 2-(2-hydroxy-5-methylphenylbenzocresol) decreased the effect, shifting the pole

Card 1/2

L 00749-66

ACCESSION NR: AP5020966

to the left nearer its normal position on the ordinate axis. The pole shift also depended on concentration of the additive; the shift decreased when more than the optimum amount of stabilizer was added. It was indicated these results serve as additional argument in favor of kinetic concepts of the nature of polymer degradation, and of the intimate relationship between degradation and thermal decomposition processes. "Diphenylmethacrylamide stabilizer was kindly supplied by T. A. Sokolov,<sup>49,55</sup> and the other stabilizers and antioxidant by Ye. N. Matveyev."  
Orig. art. has: 4 figures

4/55

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Iosse (Physicotechnological Institute) <sup>49,55</sup>  
SUBMITTED: 04Sep64

ENCL: 00

SUB CODE: MT, GC

OTHER: 000

NR REF SOV: 007

*DP*  
Card 2/2

L 35902-66 EWT(m)/EWP(w)/T/EWP(t)/ETI LJP(c) ID/II  
 ACC NR: AP6007352 SOURCE CODE: UR/0125/66/021/002/0248/0251

AUTHORS: Zhurkov, S. N.; Betekhtin, V. I.; Petrov, A. I.; Slutsker, A. I.

ORG: Physico-Technical Institute im. A. F. Ioffe (Fiziko-tehnicheskiy institut)

TITLE: Strength of aluminum at low temperature and disorientation of blocks

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 2, 1966, 248-251

TOPIC TAGS: aluminum, x ray spectroscopy, crystal lattice, tensile strength,  
Rupture strength

ABSTRACT: An x-ray analysis of ruptured aluminum specimens, broken at -180°C, was carried out. The study was undertaken to determine the reasons for the deviation of the experimentally determined destruction time  $\tau$  from that calculated from the relationship

$$\tau = \tau_0 e \left( \frac{U_0 - \gamma \sigma}{RT} \right),$$

where  $U_0$ ,  $\tau_0$  and  $\gamma$  are characteristic constants of the material,  $\sigma$  is the applied stress,  $R$  is the gas constant, and  $T$  is the absolute temperature. The experimental procedure followed is described by A. I. Slutsker and Ye. A. Yegorov (PTE, 1959, 5, 89). The experimental results are presented graphically (see Fig. 1). It is concluded that the deviation of  $\tau$  from the theoretical expression is caused by the variation in  $\gamma$ . The variation in  $\gamma$  is believed to be caused by a disorientation of blocks in the aluminum specimens.

Card 1/2

UDC: 539.292:539.4

L 35902-66

ACC NR: AP6007352

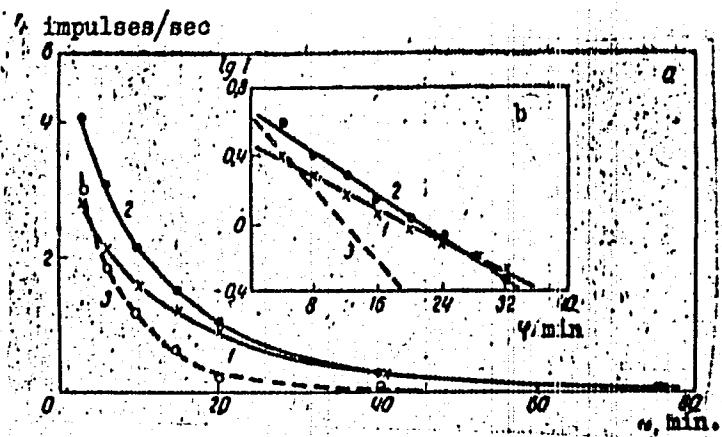


Fig. 1. Dependence of the scattering intensity on the scattering angle for aluminum specimens, ruptured at different conditions.  
 1 -  $T = -180^\circ\text{C}$ ,  $\sigma = 11 \text{ kg/mm}^2$ ; 2 -  $T = -180^\circ\text{C}$ ,  $\sigma = 16 \text{ kg/mm}^2$ ; 3 -  $T = 18^\circ\text{--}200^\circ\text{C}$ ,  $\sigma = 1.6\text{--}4.5 \text{ kg/mm}^2$ .

Orig. art. has: 2 tables and 2 graphs.

SUB CODE: 11/ SURM DATE: 17Feb65/ ORIG REF: 012/ OTH REF: 004

Card 2/2 *all*

ZHURKOV, S.N.; SAVOSTIN, A.Ya.; TOMASHEVSKIY, E.Ya.

Studying the mechanism underlying the breakdown of polymers by  
the electron paramagnetic resonance method. Dokl. AN SSSR 159  
no.2:303-305 N '64. (MIRA 17:12)

1. Fiziko-tehnicheskiy institut im. A.F. Ioffe AN SSSR. 2. Chlen-  
korrespondent AN SSSR (for Zhurkov).

ZHURKOV, S.N.; SLUTSKER, A.I.; YASTREBINSKIY, A.A.

Interrelation of the elastic deformation and structure of  
oriented polymers. Fiz. tver. tela 6 no.12:3601-3607 D '64  
(MIRA 18:2)

1. Fiziko-tehnicheskiy institut imeni Ioffe AN SSSR, Lenin-  
grad.

disorder. The transformation of one of angular variables into another will not eliminate the disorder of order

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R002065030009-6"

"APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R002065030009-6

L 60139-65

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APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R002065030009-6"

I. 34843-65

EWT at EPR(c)/EPR/EPR(+) for  $p_1 = p_2$  and  $p_3 = p_4$  and  $\Delta p = 0$

A REPORT ON THE APACHE

SOURCE: Byulleten' izobreteniiv i tovarnykh znakov, no. 1, 1965, 82

TOPIC TAGS: latex, copolymer, acrylonitrile, methacrylic acid, chloroprene

Ergonomics in Design

Card 1/8

ZHURKOVA, N. G.

The effect of variation of structure of bacterial precipitants on respiration and utilization of labeled glycine. A. I. Oparin, N. B. Gel'man and N. G. Zhurkova. *Doklady Akad. Nauk S.S.R.* 105, 1030-8 (1955). — Lysis of *Micrococcus lysodispersus* with lysozyme for 0.0 hr. at 37° was followed by electron microscopy (fixation with osmium acid and shadowing with Cr) of typical spicules and dots of respiration and utilization of labeled glycine ( $C^{14}$ ). Respiration is disturbed by earlier stages of lysis than is assimilation of glycine, as shown by a drop in respiration coeff. Variation of degree of lysis was controlled by sucrose concn.

G. M. Nonulova

1. SERGEYEV, V.: ZHURKOVSKAYA, G.: PAL'GOVA, M.
2. USSR (600)
4. Butter
7. Storage stability of molded sweet cream butter. Mol. prom. 13 no. 11, 1952.
  
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

ZHUROVSKAYA, V. Ya., Cand Agr Sci -- (diss) "Effect of molybdenum and boron on the harvest yield and quality of peas under the conditions of the Latvian SSR." Riga, 1960. 26 pp; (State Committee of Higher and Secondary Specialist Education of the Council of Ministers Latvian SSR, Latvian Agricultural Academy); number of copies not given; price not given; (KL, 17-60, 163)

ZHUROVSKI, D.

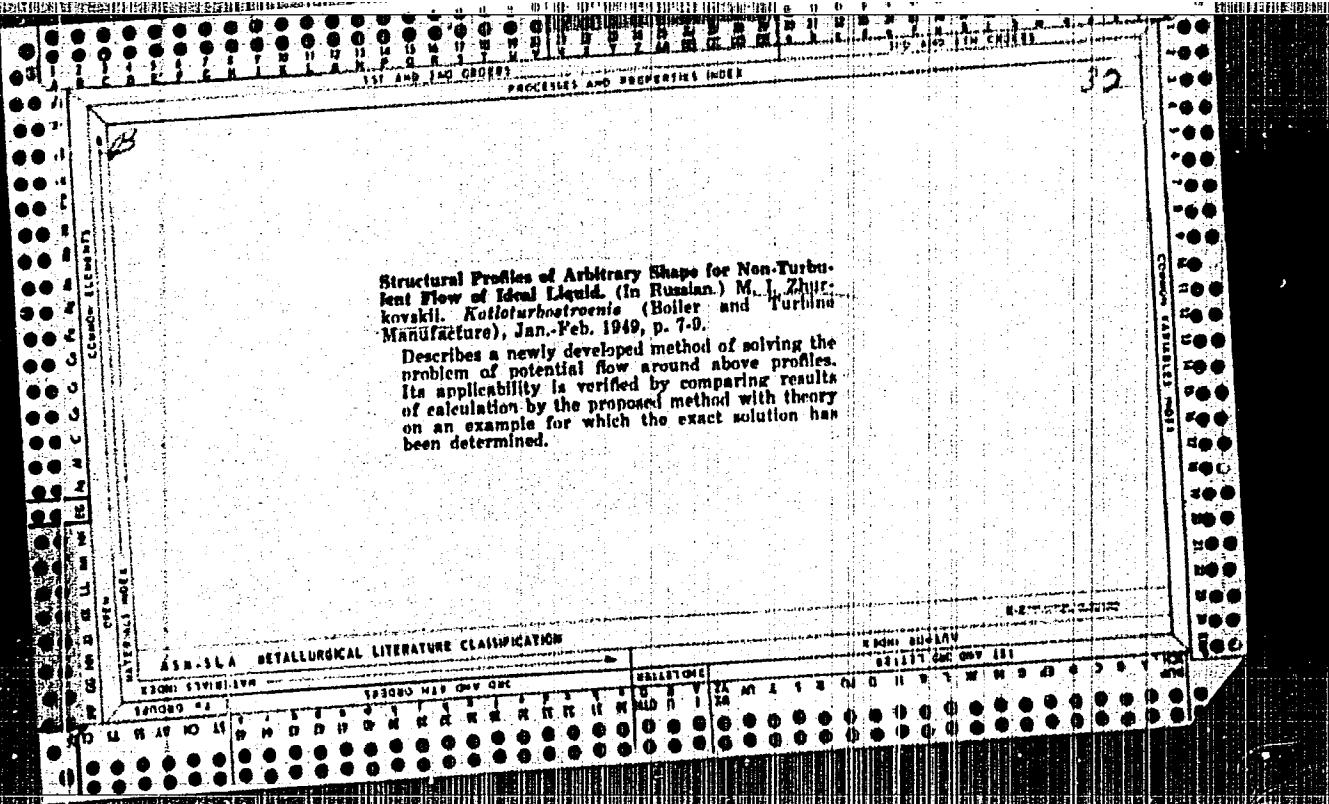
"Application of Roga's method for determining the clinkering capacity of the black coal from the Balkan basin."

KHIMIIA I INDUSTRIIA, Sofia, Bulgaria, Vol. 31, no. 1, 1959.

Monthly list of East Europe Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59,  
Sect.  
Unclassified

BA

amount of free citric acid on process of acid-formation by *Aspergillus* sp. G. I. Zhuravleva (Mikrobiologiya, 1950, 18, 65-78). The presence of citric acid in cultures of *Aspergillus* never inhibits further formation of citric acid. The effect is not due to pH but to presence of free citric acid. High concentration of citric acid in absence of carbohydrate leads to metabolism of citric acid by the organism with consequent inhibition of growth. Neutralization of the culture medium, removal of accumulating citric acid, and maintenance of carbohydrate supply are important factors in obtaining max. yields of citric acid from *Aspergillus*. D. H. SAVIN.



1. MERKULOV, M. D., Eng.; ZHURKOVA, A. V., Eng.
2. USSR (600)
4. Peanuts
7. New machines for preparing seeds and sowing peanuts. Sel'khozmashina No. 5, 1953.
  
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

*(diss)*  
ZHURKOVA, Z.A., Cand Tech Sci--"Extraction of tin from stannous  
raw material." Mos, 1959. 21 pp with graphs (Min of Geology and  
Conservation of Mineral Resources <sup>USSR</sup> USSR. All-Union Scientific  
Research Inst of Mineral Raw Materials), 200 copies (EJ, 27-59, 120)  
*(VIMS)*

- 26 -

ZHURKOVSKAYA, T. I., Candidate Med Sci (diss) -- "Morphological changes in cancer of the cervix uteri during radiation treatment". Moscow, 1959. 11 pp  
(State Sci Res Roentgenological-Radiological Inst of the Min Health RSFSR),  
150 copies (KL, No 25, 1959, 140)

ZHURKOVSKAYA, T.I., assistent

Cytological picture of the endocervix in precancerous diseases of the cervix uteri. Sbor. nauch. trud. Rost. gos. med. inst. no. 21:45-48 '63.

Prognostic importance of cytological investigations in treating cancer of the cervix uteri. Ibid.:49-52

Treatment of radiation injuries of the rectum. Ibid.:111-115

Meigs' symptom in benign tumors of the ovaries. Ibid. 127-129

(MIR 17:11)

1. Iz kafedry akushерstva i ginekologii (zav. - prof. P.Ya. Leleshuk) Rostovskogo meditsinskogo instituta i Instituta rentgenologii, radiologii i onkologii Ministerstva zdravookhraneniya RSFSR (dir. - A.K. Papkov).

LEL'CHUK, P.Ya., prof.; ZHURKOVSKAYA, T.I., assistant

Immediate results of treating cancer of the ovaries by the combined method. Sbor. nauch. trud. Rost. gos. med. inst. no.21:81-87 163. (MMA-17:11)

1. Iz kafedry akushерства i ginekologii (zav. - prof. P.Ya. Lel'chuk) Rostovskogo meditsinskogo instituta.

VRUBLEVSKIY, V.I., inzh.; ZHURLIVYY, R.N., inzh.; KRYZHANOVSKIY, O.M., inzh.

Automatic charge batching by means of a control computer. Mekh. i  
avtom. proizv. 15 no.10:45-47 O '61. (MIRA 14:10)  
(Electronic control)  
(Metallurgical furnaces—Equipment and supplies)

KRYZHANOVSKIY, O.M.; VRUBLEVSKIY, V.I.; ZHURLIVYY, R.N.

Computer automatically controlling the charging of a dipola.  
Lit.proizv. no.7:19-20 J1 '62. (MIRA 16:2)  
(Cupola furnaces—Equipment and supplies)  
(Electronic computers)

VRUBLEVSKIY, V.I.; ZHURLIVYY, R.N.

Raising the precision of proportioning the feed cupola charge  
materials. Lit. proizv. no.3:23-24 Mr '64. (MIRA 18:9)

ZAYTSEV, L. S.; SITDYKOV, S. SH.; ZHURLOV, N. I.

Geography and Geology

Requirements of industry as to the quality of mineral raw materials. Handbook for geologists--Moskva, Gos. izd-vo geologicheskoi lit-ry Komiteta po delam geologii pri SNK SSSR, No. 44, Arsenic, 1947.

9. Monthly List of Russian Accessions, Library of Congress, October 1951, Uncl.

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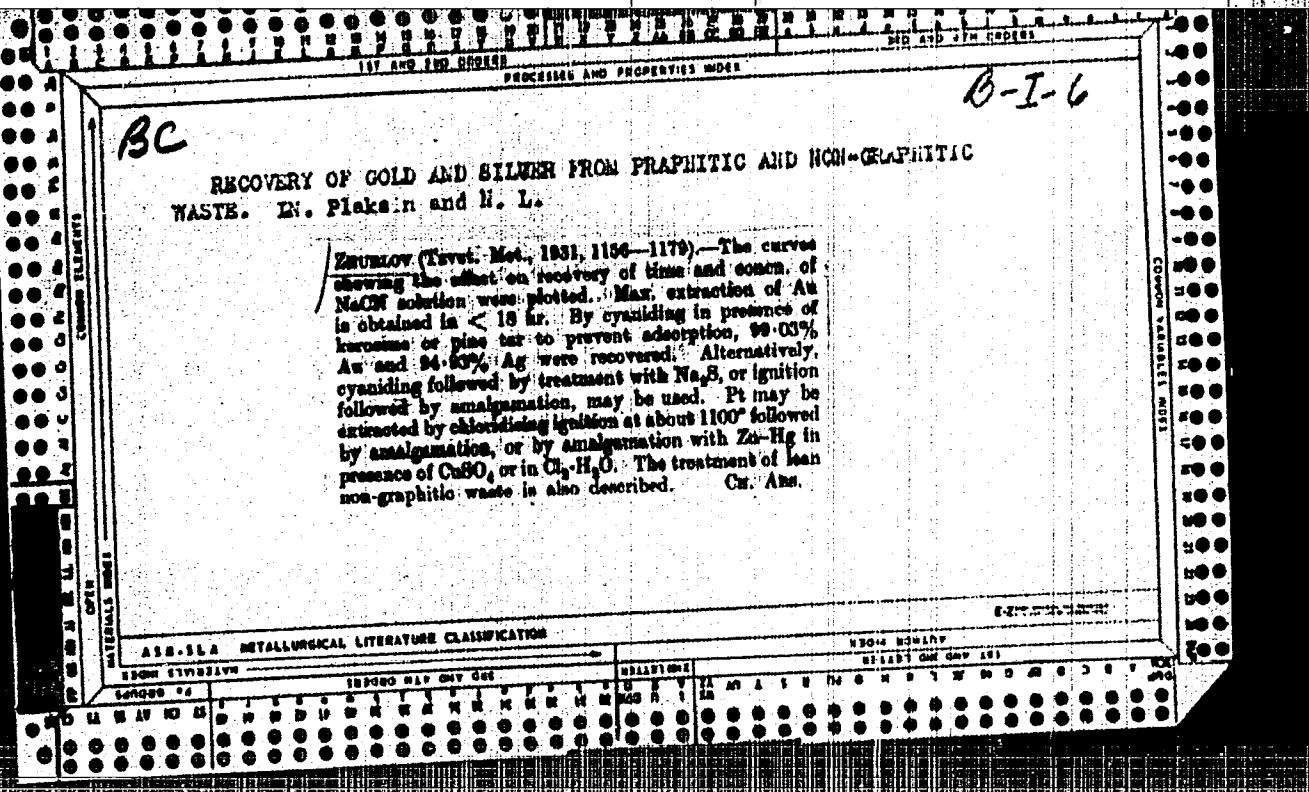
ZAYTSEV, L.S. SITDIKOV, S. SH. ZHURLOV, N.L.

Geography and Geology

Requirements of industry as to the quality of mineral raw materials. Handbook for geologists. Moskva, Gos. izd-vo geologicheskoi lit-ry Komiteta po delam geologii pro SNK SSSR No. 44.

Arsenic 1947

Monthly List of Russian Accessions, Library of Congress, October, 1952 Unclassified



ZHURLOVA, A.A.

Initiative of the leader of Tat'iana Kardash's brigade of communist labor. Shvein.prom. no.3:4-5 My-Je '62. (MIRA 15:6)  
(Kokand—Clothing industry) (Efficiency, Industrial)

ZHURMED, Zh.

Chemistry in agriculture. Nauka i zhyttia 12 no.5:36-37 My '62.  
(MIRA 15:7)  
(Agricultural chemistry)

ZHURMYNSKI, A.M., professor, doktor geolagi-mineralagichnykh nauk

Problems and prospects of the development of Soviet paleophysiology, Vestsi AN BSSR no.4:133-139 J1-Ag '54.  
(MIRA 8:9)

1. Chlen-korespondent Akademii nauk BSSE.  
(Paleontology)

ZHURNAKOVA, M. A. Senior Scientific Collaborator, Leningrad NIVI.

"Identification of Brucellae in the outer habitat by means of the complement fixation reaction."

Veterinariya, Vol. 38, No. 1, p. 75, 1961.

ZHURNAKOVA, M.A., starshiy nauchnyy sotrudnik

Brucella detection in environmental objects by the reaction of complement fixation. Veterinaria 38 no.1:75-77 Ja '62.

(MIRA 15:4)

1. Leningradskiy nauchno-issledovatel'skiy veterinarnyy institut.  
(Brucella) (Complement fixation)

ZHURNAKOVA, M.A., doktor veterin. nauk; MALYGIN, V.I., nauchnyy sotrudnik;  
BORISENKOVA, A.N., nauchnyy sotrudnik; BOLOTNIKOV, I.A.

Parasllergic reaction to tuberculin by cattle affected with fowl-type  
microbacteria. Veterinariia 41 no.3:23-25 Mr '64.

1. Leningradskiy nauchno-issledovatel'skiy veterinarnyy institut (for  
Zhurnakova, Malygin, Borisenkova). 2. Glavnnyy veterinarnyy vrach  
Sovkhoza "Vernyy put'", Leningradskaya ob. (fo. Boletnikov).  
(MIRA 18:1)

MALYGIN, V.I., nauchnyy sotrudnik; BORISENKOVA, A.N., nauchnyy sotrudnik;  
ZHURNAKOVA, M.A., doktor veterin. nauk; BOLOTNIKOV, I.A.

Infection of cattle with the tuberculosis agent of ~~human~~  
type. Veterinariia 41 no.4:37-39 Ap '64. (MIRA 17:8)

1. Leningradskiy nauchno-issledovatel'skiy veterinarnyy  
institut (for Malygin, Borisenkova, Zhurnakova). 2. Veterinarnyy  
vrach sovkoza "Vernyy put'" (for Bolotnikov).

ZHURNAKOVA, M.A., doktor veterin.nauk; MALYGIN, V.I., nauchnyy sotrudnik;  
BORISENKOVA, A.N., nauchnyy sotrudnik; SHORSHNEV, V.I., aspirant;  
SYUMKINA, G.V.

Allergy in hens without tuberculosis lesions. Veterinaria 41  
no.3:38-40 Mr '65. (MIRA 18:4)

1. Leningradskiy nauchno-issledovatel'skiy veterinarnyy  
institut (for Zhurnakova, Malygin, Borisenkova, Shorshnev).
2. Glavnnyy veterinarnyy vrach sovkhzo "Fudost", Gatchinskoye  
proizvodstvennoye upravleniye, Leningradskaya oblast' (for  
Syumkina).

SHORSHNEV, V.I., aspirant; ZHURNAKOVA, M.A., doktor veter. nauk, nauchnyy rukovoditel'

Studying acid-resistant bacteria isolated from unused peat litter. Veterinariia 42 no.10:41-43 O '65.

(MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po boleznyam ptits.

ZHURNIKOV, G.S.

Electrode of zero potential. J.appl. Chem. USSR '52, 25, 561. (MLRA 5:5)  
(BA -AI My '53:451)

ZHURNIKOV, G. S.

Electrochemical  
Equilibria & VarietiesChem 2  
①

Electrode of zero potential. G. S. Zhurnikov (*J. appl. Chem. USSR*, 1952, 25, 581).—On the basis of the relationship between the normal electrode potentials,  $E$ , and the ionic and atomic radii of metals,  $E_n = f(R_a - R_i)$ , proposed earlier by the author (*ibid.*, 1949, 22, 977), it is suggested that if  $E_n$  for metals be plotted against the corresponding  $(R_a - R_i)$  values, the intercept on the  $E_n$  axis will give the true zero potential, on the H scale, for an imaginary metal having an ionic atmosphere of zero thickness. This value of  $E_n$  is shown to be +2.2 v.

R. C. MURRAY

MF  
7-24-52

S/080/62/035/011/007/011  
D287/D301

AUTHORS: Rozental', L.V., Zhurnina, F.G., and Smirnov, O.K.

TITLE: The plasticizing effect of compounds which act as solvents for cellulose triacetate.

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 11, 1962,  
2512 - 2520

TEXT: The solvent action of phenylethyl phenols and of some of their derivatives (esters of fatty acids and fatty alcohols) was studied. Films of partially saponified cellulose triacetate, containing approximately 60 % bound acetic acid and having an average degree of polymerization of 350 were used during the experiments. The phenylethyl phenols were prepared by condensing phenol and styrene in the presence or absence of  $H_2SO_4$  in toluene. A mixture of o-and p-isomers as well as the di-substituted compound 2,4 - di ( $\alpha$ -phenylethyl phenol) were obtained during both methods of synthesis. The isomers were separated by repeated rectification and crystallization of the p-isomer. It was found that compounds containing an

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The plasticizing effect of ...

S/080/62/035/011/007/011  
D287/D307

unsubstituted hydroxy group in the phenyl nucleus acted as solvents for cellulose triacetate. The plasticizing effect of compounds which have a low degree of compatibility is greater than that of plasticizers soluble in cellulose triacetate; this is improved by reduced brittleness of the film, especially at low temperatures (at -60°C). The authors suggest that plasticizing compounds with different degrees of compatibility with cellulose triacetate as well as discrepancies between the specific weight of the films account for the above phenomenon. The slight effect of plasticizers (which are completely compatible with cellulose triacetate) at low temperatures is also due to the strong interactions between the hydroxyl groups of the partly saponified cellulose triacetate and the polar groups of the plasticizer, i.e. the hydroxy groups of the phenylethyl phenols. There are 6 tables.

SUBMITTED: June 2, 1961

Card 2/2

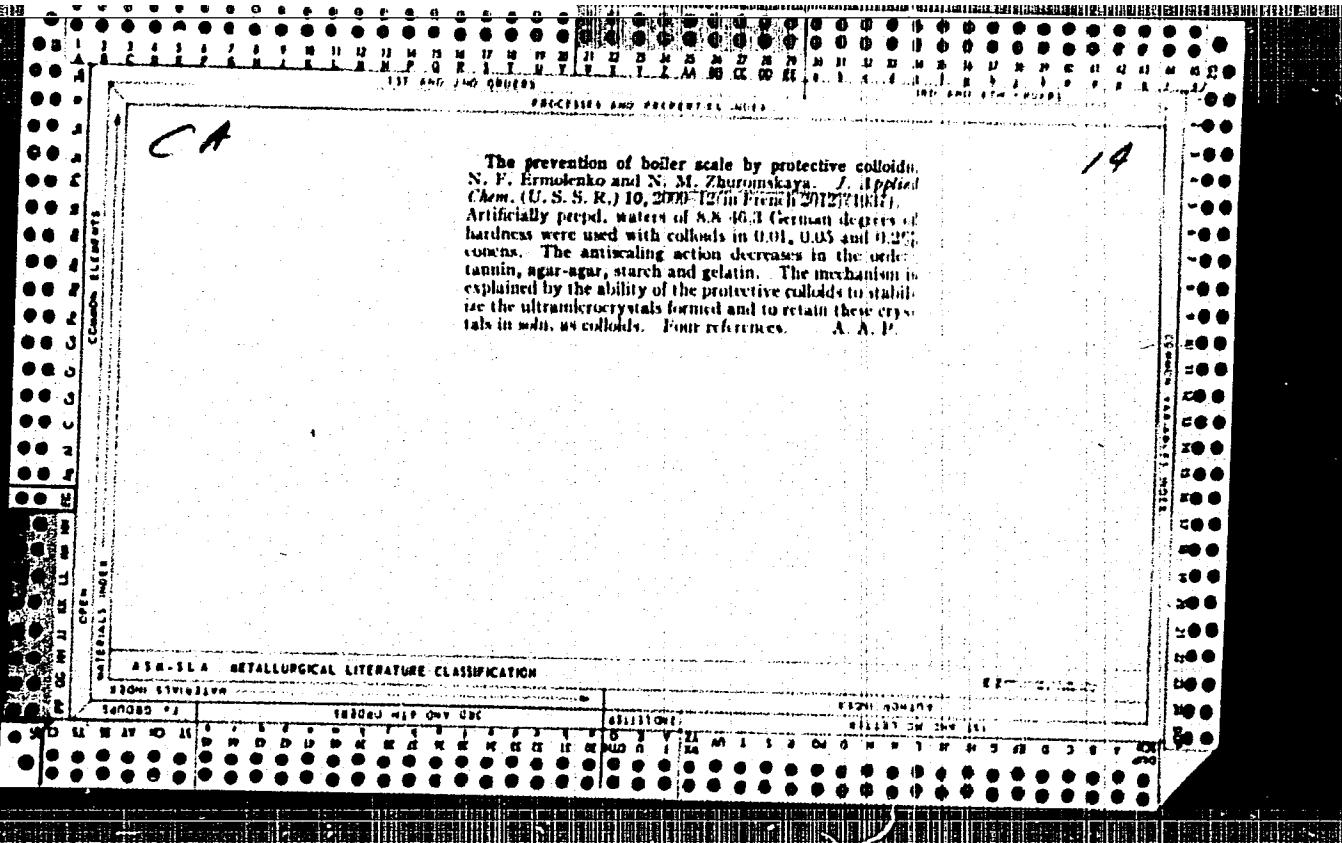
ZHURNOVSKAYA, N.V.

AZELITSKAYA, R.D., dots., kand. tekhn. nauk; ZHURNOVSKAYA, N.V., inzh.

Effect of alkalies ( $K_2CO_3$ ,  $Na_2CO_3$ , and  $LiCO_3$ ) on some properties of cement. Trudy NPI 27:147-150 '56. (MIRA 10:12)

1. Kafedra tekhnologii tsementa Novocherkasskogo politekhnicheskogo instituta.

(Alkalies) (Cement)



An Attempt to Produce High-Grade Medium Hard Cast-Iron Rolls. A. Zhurov and T. L'vov. (Stal, 1938, No. 3, pp. 54-57). (In Russian). Considerable improvements were achieved at the Komintern Works by changing over to chill-casting instead of the previously used dry-sand casting method of producing rolls. The iron contained 3.1-3.34% of carbon, 0.45-0.55% of silicon, 0.6-0.8% of manganese, 0.2-0.3% of phosphorus and on the average 0.1% of silicon. A finer graphitic structure was also obtained in the chill-cast rolls by the addition of graphitising constituents and of up to 30% of steel scrap. The microstructural characteristics of the chill-cast rolls are briefly dealt with.

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R002065030009-6"

ZHUKOV, B.M., inzh.

Cogged supports designed by the all-Union Scientific Research Institute for the Organization and Mechanization of Mine Construction. Shakht. stroi. 9 no.6:9-11 Je '65.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii shakhtnogo stroitel'stva. (MIRI 18:7)

ZHUROV, E.M., inzh.

Use of precast reinforced concrete for lining inclined shafts. Ugol'  
Ukr. 5 no.11:22-24 N '61. (MIRA 14:11)  
(Mine timbering) (Precast concrete construction)

ZHUROV, E.M., inzh.; KHTEL'NITSKIY, L.Ya., inzh.

Sectional reinforced concrete linings for inclined shafts. Krepl.  
gor. vyr. ugol'. shakht no. 1:188-202 '57. (MIRA 11:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii i  
mekhanizatsii shakhtnogo stroitel'stva.

(Shaft sinking)

(Mine timbering)

(Reinforced concrete constructions)

OVTSYN, Nikolay Konstantinovich; VARENYSHEV, Viktor Mikhaylovich; ZHUROV, Ivan Ivanovich; IVANOV, P.P., red.; PANKRATOV, A.I., tekhn. red.

[Repair of automatic "AT" looms] Remont avtomaticheskikh tkatskikh stankov tipa "AT". Ivanovo, Ivanovskoe knizhnoe izd-vo, 1960. 142 p.  
(MIRA 14:7)

(Looms—Maintenance and repair)

ZHUTOV, M. N.

We are creating conditions for increased labor productivity.  
Stroi.mat. 6 no.1:9 Ja '60. (MIRA 13:5)

1. Brigadir slesarey kar'yera Pavlovskogo zavoda silikatnykh i  
stroitel'nykh materialov.  
(Pavlovsk(Leningrad Province)--Quarries and quarrying--Equipment and supplies)

ARYUTKIN, N.V.; ZHUROV, N.A.

Complex automatization of the fabrication of refractory  
powders and their transportation. Prom.energ. 15 no.5:  
22-23 My '60. (MIRA 13:7)  
(Refractory materials) (Automatic control)

BUTYRIN, A.V.; ZHUROV, N.M.; YEVSTIFEEV, N.M.

Attaching an aerosol generator to the spraying machine. Zashch.  
rast.ot vred.i bol. 4 no.3:21-23 My-Je '59.  
(MIRA 13:4)

1. Inzhenerny po khlopku Gosudarstvennogo spetsial'nogo konstruktor-  
skogo byuro.  
(Spraying and dusting equipment) (Aerosols)

VISHNEVSKIY, Zakhar Arkad'yevich; ZHUROV, V.M., retsenzent;  
BARINOVA, O.N., red.

[Repair of amateur motion-pictures] Remont liubitel'nykh  
skikh kinos"emochnykh kamer. Moskva, Legkaya industriya,  
1965. 186 p. (MIRA 18:2)

ZHUROV, Ye.G.; KRONSHTOFIK, S.P.

Improvement of the BEM-2 machine. Terf.prom. 32 no.8:28 '55.  
(Peat machinery) (MIRA 9:4)

KRONSHTOFTIK, S.P.; ZHUROV, Ye.G.

Lowering the specific weight of electric peat-laying machines  
for working wet top deposits. Torf.prom. 32 no.3:13-14 '55.

1. Torfopredpriyatiye "Oster"  
(Peat machinery)

(MLRA 8:6)

SEMINOV, I.; PANOV, G.M.; ZHUROV, Yu.A.

Separation of carbon isotopes by the bicarbonate method. Vest. Mosk. un. Ser. 2: Khim. 15 no.5:6-12 S-0 '60. (MIRA 13:11)

1. Moskovskiy gosudarstvennyy universitet, kafedra fizicheskoy khimii.

(Carbon—Isotopes) (Isotopes—Separation)

21.3200

21(5)

AUTHORS:

Semiokhin, I. A., Panchenkov, G. M., Zhurov, Yu. A.

66875  
SOV/16-33-11-46/47

TITLE:

New Data on the Application of the Isotope Exchange Between  $\text{CO}_2$  and  $\text{CO}_3$  for the Separation of the Isotopes of Carbon and Oxygen

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, No 11, pp 2633-2635

(USSR)

ABSTRACT:

The separation of the carbon isotopes according to the bicarbonate method is difficult, because of the low degree of solubility of  $\text{CO}_2$  in salt solutions, which was also proved by the experiments of N. N. Tunitskiy et al (Ref 2). The solubility of  $\text{CO}_2$  in bicarbonate solution can be increased by the addition of organic solvents which mix with water. Experiments were made with the addition of 5% of methanol or 5% of acetone to a 20% potassium bicarbonate solution. The column (2 m high and 16 mm in diameter) was filled with a synthetic aluminum silicate catalyst (16.0% of  $\text{Al}_2\text{O}_3$ ) and the bicarbonate solution was passed through at a rate of  $4.0 \pm 0.1$  ml/minute. The experimental results (Fig 1) show that the addition of methanol has no influence on the separation of the carbon isotopes, while an in-

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SOW/76-33-11-46/47

New Data on the Application of the Isotope Exchange Between  $\text{CO}_2$  and  $\text{CO}_3$  for the Separation of the Isotopes of Carbon and Oxygen

crease of the general separation coefficient was achieved with acetone. The experiments of Urey et al (Ref 5) showed that this was not achieved with pure acetone. Investigations have still to be carried out on the side-reaction  $\text{CO}_2 + \text{acetone} \rightarrow$  acetone- $\text{CO}_2$ ; acetone- $\text{C}^{12}\text{O}_2 + \text{C}^{13}\text{O}_2 \rightleftharpoons$  acetone- $\text{C}^{13}\text{O}_2 + \text{C}^{12}\text{O}_2$ .

The isotope exchange in the system  $\text{CO}_2 - \text{HCO}_3 - \text{CO}_3$  is recommended for the concentration of the isotope  $\text{O}^{18}$ . Since a worker of the laboratory of V. K. Korovkin according to the method of Bigeleisen (Ref 6) calculated the constant of equilibrium of the reaction

$3\text{CO}_2^{16} + 2\text{CO}_3^{18} \rightleftharpoons 3\text{CO}_2^{18} + 2\text{CO}_3^{16}$  solution to be  $K_{293} = 1.42$ , it could be assumed that  $\text{O}^{18}$  will accumulate in the gas-phase. The separation coefficient calculated with the equation of A. I. Brodskiy (Ref 7) is  $\alpha_{293} = 1.06$ . Carbon dioxide was used as initial substance, a 12.4% KOH-solution served as absorption

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New Data on the Application of the Isotope Exchange Between  $\text{CO}_2$  and  $\text{CO}_3$  for the Separation of the Isotopes of Carbon and Oxygen

agent. The separation of the oxygen isotopes was carried out in a column of the above mentioned dimensions, but different fillers were used (aluminum silicate catalyst 11.5%  $\text{Al}_2\text{O}_3$  and 83.9% of  $\text{SiO}_2$ , alumina from the Askanskoye deposits 16.5% of  $\text{Al}_2\text{O}_3$ , 75.4% of  $\text{SiO}_2$ , nickel chromium spirals and active carbon (BAU)), which were subjected to previous treatment. The best results were obtained (Fig 2) with active carbon (BAU), i.e. a separation coefficient of  $S = 1.135$ . Finally thanks are expressed to L. N. Gorokhov for his help in the mass-spectrometrical analysis. There are 2 figures and 7 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova  
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: June 9, 1959  
Card 3/3

ZHUROVA, L.Ye.

Development of sound analysis of words in preschool children.  
Vop. psikholog no.3:21-32 My-Je'63. (MIRA 17:2)

1. Institut psikhologii Akademii pedagogicheskikh nauk RSFSR,  
Moskva.

ZHUKOVA, M.V.

Treatment of male hypogenitalism in children and adolescents. Trudy Ukr. nauch.-issl. inst. eksper. endok. 19;327-331 '64. (MIRA 18:7)

1. Iz klinicheskogo otdela Ukrainskogo instituta eksperimental'noy endokrinologii.

ZHUROVA, M.V., TSYUKHNO, Z.I.

Hirsutism in the porphyrin disease. Trudy Ukr. nauch.-issl. inst. eksper. endok. 19:393-396 '64. (MIRA 18:7)

1. Iz klinicheskogo otdela Ukrainskogo instituta eksperimental'noy endokrinologii.

ZHUROVA, M.V.

Some problems in the etiology and treatment of disturbances of growth and sexual development in children and adolescents. Ped. akush. i gin. 23 no.1:14-17 '61. (MIRA 14:6)

1. Klinicheskoye otdeleniye (rukoveditel' - prof. M.A.Kopelovich) Ukrainskogo instituta eksperimental'noy endokrinologii (direktor - kand.med.nauk S.V.Maksimov).  
(CHILDREN—GROWTH) (CHILDREN—DISEASES)

ZHURSOVA, M.V., Cand Med Sci — (diss) "Certain problems of the etiology, treatment, clinic, and ~~therapy~~ of the disturbances of growth and sexual development in children and adolescents." Khar'kov, 1958. 13 pp (Khar'kov Med Inst)

320 copies (KL,43-58, 118)

-50-

MILOSLAVSKIY, M.Ya.; ZHUROVA, M.V.

Detection and treatment of disorders of sexual development in  
girls. Trudy Ukr.nauch.-issel.inst.eksper.endok. 18:323-327 '61.  
(GENERATIVE ORGANS, FEMALE--ABNORMALITIES AND DEFORMITIES)

ZHUROVA, M.V., DRAZNIN, N.M., BOBANOVSKAYA, L.I.

"The Problem of the Functional Conditions of the Thyroid Gland during Pregnancy"  
p. 90, in the book Experience in the Use of Radioactive Isotopes in Medicine  
R. Ye. KAVETSKIY and I.T. SHEVCHENKO, published by the UKRMedizdat Publishing  
House of the UKRAINIAN SSR, KIEV 1955, represents medical transactions of a  
conference held in KIEV from 18-20 January 1954.

Sc: 1100235

ZHURGOV, B

7/5  
602.4  
.26

Konstruktivnyye elementy sistem teplosnabzheniya i ventilyatsii (Construction factors of heat-supply and ventilation systems) Moskva, Gosstroyizdat, 1954.

382 p. illus., diagrs., tables.

"Literatura": p. (381)

ZHUROVLEV, Boris Alekseyevich

N/5-  
733.95  
.261

Spravochnik Po Montazhu Vnutritsedhovykh Truboprovodov (Reference Book for Assembly of Inter-Shop Pipe Conduits, By) S. N. Lisitsyn, Moskva, Gosstroyizdat, 1959.

219P. Diags., Graphs, Tables.

KOLEV, N.; KILIMOVA, L.; ZHUROVSKA, N.

Oxidation of ethylene up to ethylene oxide. Khimi i industriia 34  
no.2:64-69 '62.

KOLEV, N.; ZHUROVSKA, N.; KILIMOVA, L.; TSANKOV, Khr.

Mechanism of the activation of a silver catalyst for the oxidation of ethylene into ethylene oxide. Godishnik Inst. khim. prom. 2:71-81 '63.

Critical humidity of soils to which different kinds of fertilizers have been added. A. Bublich and B. Zhuang-askay. *Proc. Conf. Soil Sci., Satara 2*, 222-30 (1957). The optimum humidity of the soil, for sprouting of seeds of a no. of plants, is higher in presence of fertilizers than in their absence. The individual effects of the cations and anions added are discussed. B. C. P. A.

ASD-51A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/16/2001

CIA-RDP86-00513R002065030009-6"

ZHUROVSKAYA V. Ya. (USSR)

"Effect of Molybdenum and Copper on the Yield and Quality  
of Grazing Meadow Grasses."

Report presented at the 5th Int'l Biochemistry Congress,  
Moscow, 10-16 Aug. 1961

ZHUROVSKI, D., KARANESHEV, K.

Swelling pressure of coals in coking. Min delo 18 no. 12:  
33-35 D '63.

1. Nauchnoissledovatelski institut za koksokhimia i neftoprerabotvane.

ZHUROVSKI, D.

Coal-tar pitches with various physiochemical properties, and their influence on the coking capacity of poor, bad-coking coals. Khim i industriia 35 no.2:54-57 '63.

ZHUROVSKIY, B.F., student IV kursa

Device for the visual observation of transistor characteristics.  
Sbor.stud.nauch.rab.LEIIS no.1:61-64 '59. (MIRA 13:4)

1. Leningradskiy elektrotekhnicheskiy institut svyazi imeni  
prof. M.A.Bonch-Bruyevicha.  
(Transistors) (Electronic measurements)

ZHUROVSKIY, L.S.

Access through puncture to the anterior plexus arteriae cerebri.  
Sov.med. 21 Supplement:20 '57. (MIRA 11:2)

1. Iz kafedry obshchey khirurgii Kalininskogo meditsinskogo instituta.  
(LOCAL ANESTHESIA)

ZHURTSOV, V.G.; KUBAREV, A.I.; USAN, M.V.

Determination of the zones of tolerance for the adjustment of  
machine tools. Priborostroenie no.12:21-24 D '64.

(MIRA 18:3)

KUBAREV, A.I.; USAN, M.V.; ZHURTSEV, V.G.

Organization of a preventive statistical control. Standarti-  
zatsiia 28 no.6:38-42 Je '64. (MIRA 17:9)